

ourselves with the thought that the storm coming from south-east argued well for an ice-free interior. When it cleared a little we strained our eyes to trace any mountains which would break the ice horizon around us, which everywhere was as level as that of the sea. The desire soon "to be *there*" was as fervent as that of the searchers of the Eldorado of yore, and the sailors and the Lapps had no shadow of doubt as to the existence of an ice-free interior. And at noon, before reaching camp No. 12, everybody fancied he could distinguish mountains far away to the east. They appeared to remain perfectly stationary as the clouds drifted past them, a sure sign, we thought, of its not being a mass of clouds. They were scanned with telescopes, drawn, discussed, and at last saluted with a ringing cheer. But we soon came to the conclusion that they were unfortunately no mountains, but merely the dark reflection of some lakes further to the east in the ice desert.

A. E. NORDENSKJÖLD

(*To be continued.*)

THE RE-ENTOMBMENT OF WILLIAM HARVEY

FOR two hundred and twenty-six years the mortal remains of the immortal discoverer of the circulation of the blood rested, unburied, in a vault of a little church in the parish of Hempstead, about seven miles from Saffron Walden, in Essex.

Harvey died on the 3rd of June, in the year 1657, being then in his eightieth year, but the precise place of his death is not known. He fell, full of days and honours, and retained his faculties so completely to the last day of his life that he directed his apothecary, Samboke, what to do in the way of treatment. He beckoned to Samboke to take blood from under the tongue as the speech was failing,—a line of treatment which would have little favour in these days,—and as the sun of June 3 went down he went down also. His death, no doubt, took place in London, and probably near to Smithfield.

On June 26, twenty-three days after the death, the body of William Harvey was laid in the vault at Hempstead. In the interval a cast had been taken from the face for a rough and ready sculptor to work from, and the body, after a custom of the time, rolled first, in all probability, in a cere cloth, had been inclosed in a leaden chest. It was then conveyed to Hempstead, a distance of about fifty miles, in those days a journey of no slight importance. The body was followed by many of the Fellows of the College of Physicians out of town, and it may be that some of them went as far as Hempstead. Certainly one scholar, though he was not a Fellow, namely Aubrey, the historian, was present when the body was put into the vault. "I was at his funeral, and helpt to carry him into the vault." These are Aubrey's words. The vault referred to had been built by Eliab, the merchant brother of the anatomist, and over it was erected a chapel connected with the church at the north-eastern corner. The vault was afterwards filled with the bodies of members of the Harvey family, some few "lapt in lead," like their great relative, others laid in coffins.

For nearly two centuries little seems to have been recalled of the remains of the anatomist. They lay with their kindred in the village sepulchre without reference being made to them. In 1847 Dr. Richardson, F.R.S., then assisting Mr. Thomas Browne, a surgeon in Saffron Walden, was told one day by a cottager that the great Dr. Harvey was buried in Hempstead Church, and next day discovered that it was really Harvey the anatomist and physiologist, and that the body, "lapt in lead" as Aubrey described, lay there probably as it had originally been placed.

At that time the foot of the leaden chest lay under the

open window of the vault. There was then no opening in the lead, but the upper surface towards the middle of the body was beginning to show signs of sinking in. There was much dust and several stones on the chest, which were removed. The remains were reported upon after this by Dr. Tyler Smith, who had visited the place, to the Royal College of Physicians, and in 1859 the College deputed the late Dr. Alexander Stewart and Dr. Quain to visit and report. They made their report, and some changes were carried out in the vault; but the window, although protected by the addition of iron bars, was left open, and, under the influence of air and damp, the lead began to give way.

From time to time Dr. Richardson visited the place and reported on the changes which were in progress. In the lower part of the lid of the leaden chest the sinking became so increased that a kind of oblong basin was formed, in which rain water, beating in from the window, accumulated. Then an opening, taking the shape and size of one of the sound openings in a violoncello, was formed, and water was admitted into the shell itself. Twice it seemed filled with thick pitchy-looking fluid, and although the opening was temporarily filled up with solder, the repair did not last very long.

In 1878 Dr. Richardson made another visit to Hempstead, and on November 30 of that year published in the *Lancet* a full report on the condition of the remains, together with six illustrations. The report created considerable attention, and led the way to the alteration that has been recently effected. In January, 1881, the beautiful tower of the old church at Hempstead suddenly fell, dragging a portion of the church with it. It was found that the Harvey vault and chapel were not injured, but that the leaden shell in which Harvey was laid was again filled with water, and that the preservation of the case could not be much longer insured. In February, 1882, the Royal College of Physicians, formed a committee to undertake the duty of placing the remains in a position in which they would be permanently retained. The result was that the College obtained permission of the representatives of the Harvey family to remove the remains from the vault and to place them in a solid marble sarcophagus in the Harvey chapel above. Such is a succinct history of the proceedings previous to the removal and re-entombment on October 18 of this year.

The ceremony of the 18th was extremely simple. As was befitting, a number of the Fellows of the College—eight in all—bore the remains from the vault along the northern side of the church to the western entrance, and so through the aisle to the entrance of the Harvey chapel, on the left of the chancel. The vicar of Hempstead, the Rev. R. H. Eustace, and the curate, the Rev. J. Escreet, led the procession; then came the bearers with their charge on a bier; after them, four of the representatives of the Harvey family; and, next in order, the President, all the office-bearers, and the Fellows of the Royal College of Physicians who had come to take part in the ceremonial.

After a short service the leaden case was placed in the sarcophagus. On the breastplate of the case the original inscription—

Doctor
William. Harvey
Dceased. The. 3.
Of Jvne 1657.
Aged 79 years

was still quite perfect, as was also a rough metal cast of a face with a small imperial from the lower lip to the chin. After the remains had been laid in the marble, the President of the College, Sir William Jenner, placed on them a leaden case containing the College edition of the complete works of Harvey. The volume was the Latin edition of 1766, edited for the College by Mark Akenside, including in the first pages a life

of the illustrious anatomist and discoverer. Together with this volume there was also put into the sarcophagus a memorial bottle cased in lead and containing various details relating to the removal. The bottle included views of the church, before and after the fall of the tower, executed on wood; a description of the church and the vault, and the time the remains had been in the vault; several photographic views of the church; a beautiful photograph of the bust of Harvey; a scroll of vellum on which was engraved a description of the reasons why the remains had been put into the marble, with the names of all who had taken part in the ceremony; and a printed account of the proceedings that were carried out at the second interment on October 18th, 1883. The sarcophagus was then finally closed by rolling on and cementing down the massive cover or lid. On the western side of the sarcophagus is engraved the following:—

THE REMAINS OF WILLIAM HARVEY,
DISCOVERER OF THE CIRCULATION OF THE BLOOD,
WERE REVERENTIALLY PLACED IN THIS SARCOPHAGUS
BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON
IN THE YEAR 1883.

At the foot are inscribed the words,

WILLIAM HARVEY.
BORN 1578. DIED 1657.

NOTES

WE are glad to learn that M. Dumas is much better, though it is probable he will have to spend the winter in the south of France.

THE arrangements for beginning work at Ben Nevis Observatory will be completed this week, and Mr. Omond will take up his post on the summit in the middle of next week, when observations will be at once begun. The telegraph cable has now been completely laid.

THE Fisheries Exhibition was closed yesterday with much ceremony; its success as a popular exhibition is almost unprecedented, and, as we have pointed out in several articles, some of the exhibits have been of real scientific value.

WE regret to announce the death, last Saturday, of M. Breguet, the well known electrician, member of the French Institute and of the Bureau des Longitudes. M. Breguet's second son, a promising electrician, died about twelve months ago, and was deeply regretted. The death of M. Breguet has been all the more noticed that a few days ago the death of M. Niaudet-Breguet, his nephew, was announced. M. Niaudet-Breguet was also devoted to electricity. The well-known Breguet firm will not be extinguished by these multifarious losses, having been made lately a joint stock company. It is one of the oldest in Paris, having been established in 1783.

THE arrangements for the International Forestry Exhibition which is to be held in Edinburgh next year have been settled. The classification of the exhibits ranges over a wide and interesting field. Practical forestry will be illustrated by implements, models of huts, appliances for floating and transporting timber, and wood-working machinery of every description. The department of forest produce will include a collection of the chief uses to which the raw and the manufactured material of the woods may be applied. The class of scientific forestry will deal with the botany of the forests, forest entomology, preservative processes applied to timber, fossil plants, parasites, and numerous other subjects. Growing specimens of rare and ornamental trees and shrubs, rustic work in arbours, bridges, gates, and seats, and dried specimens of ornamental objects will exemplify the

division of ornamental forestry. The remaining departments will include pictorial illustrations of the trees, foliage, and scenery of all countries, and the effects of blight, accident, parasitic growth, and abnormal conditions, together with the literature of forestry, working plans of plantations, and examples of the economic condition of foresters and woodmen. The entries for the Exhibition will close on October 4, 1884.

LAST Thursday, October 28, the three classes of the French Institute held their annual meeting. The addresses were delivered this year by the members of other classes than the Academy of Sciences. In the evening the members of the Institute held a great banquet by subscription among themselves. This is the first time that the annual meeting has been so solemnised.

THE seventh International Geodetic Conference terminated its labours on October 24, when the acting president, Col. Ferrero, proclaimed the result of the new election of the permanent committee, as follows:—Lieut.-General Ibanez, Director-General of the Geographical and Statistical Institute, Madrid, President; Col. Ferrero, President of the Italian Geodetic Commission, Vice-President; and Dr. Hirsch, Director of the Observatory at Neuchâtel, and Dr. von Oppolzer, Professor of Astronomy at the University of Vienna, Secretaries. Prof. Bauernfeind read his report on refraction, which was followed by a proposal, made by Major Hartl, and approved, to the effect that the Conference expressed a hope that all the European States represented in the Association would institute thorough investigations into terrestrial refraction, in order to ascertain the influences which the different characteristics of the ground and of the climate exercise upon refraction. Prof. Schiaparelli, Director of the Observatory at Milan, read the report of the special committee named to consider the proposal made by Prof. Fergola regarding systematic observations of latitude, with the intent of verifying the stability of the terrestrial axis of rotation, and ascertaining the movements of the poles; which report, after some discussion regarding the manner in which the observations should be carried out, was approved.

BARON NORDENSKJÖLD has, in consequence of the attacks which have been made in foreign journals in connection with the unfortunate *Djmphna* expedition, on his theory as to the navigability of the Kara Sea, telegraphed to Lieut. Hovgaard inquiring whether he considered it would have been possible to reach the Yenisei this summer. Lieut. Hovgaard replied that he was fully convinced that had he been prepared to proceed he could easily have reached Siberia this autumn, and further points out that he could have done so last year also had he not, by signals of distress from the *Varna*, been compelled to leave the lead along the shore of the Waigatz Island, which was open as far as the eye could reach, and enter the pack ice where he was frozen in.

IN No. 3, vol. vi. of the *Deutsche Geographische Blätter* is an article by Prof. Börgen, in which he discusses the objects proposed and the theories entertained by Nordenskjöld in connection with his expedition to Greenland. The paper was written before the expedition left. Dr. Börgen adduces some particulars which make him incline to the supposition that the watershed of Greenland lies rather towards the east than the west. In any case, in consideration of the comparatively short distance of any part of Greenland from the sea, and of its low average temperature, Dr. Börgen argues that winds both from the east and the west must deposit snow everywhere on the weather side of the mountains against which they strike, and so maintain the conditions for the formation of glaciers. These glaciers, again, must in the course of time drift down into the valleys and the lowest levels, the temperature of Greenland even down to the level of the sea